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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. <u>3847</u>	Press <u> </u>
<u>52-53</u>	Mis. <u> </u>
Dated <u>4</u> -- <u>12</u> -- 18 <u>66</u>	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
4th December 1866.*

No. 52. Read the following letter from the Superintending Engineer, 6th Division, to the Secretary to Government, Public Works Department, dated Tanjore, 27th November 1866, No. 1,029:—

1. With reference to G. O. No. 3,526, of the 5th November, I have the honor to inform you that it is too late in the season to try the experiment to ascertain the quantity of water required to mature a rice crop.

G. O. No. 2,697, dated 14th September.

2. I explained in letter No. 967, dated 5th September 1865, the difficulties which would attend the experiment in a district watered as Tanjore is, and proposed that Captain Hasted should undertake the experiment in his own compound. He has since given up the house he then occupied, and as I am convinced that the experiment cannot be undertaken in this division with a shadow of a chance of obtaining correct data, it would be inexpedient to make any outlay in the attempt.

3. In connexion with the experiment relative to the quantity of water required to bring a rice crop to maturity, the two following points appear to me to be worthy of consideration:—

First.—That in cases in which large areas are irrigated, as in the Delta districts, where it is impossible to supply manure artificially for the lands, the out-turn of the crops is due, in a great degree, to the alluvium deposited on the lands. When the rivers are in flood, water, rich with deposit, is allowed to flow on to the irrigated lands, and is confined by the field banks till the deposit has settled, when the clear water is allowed to flow off by the surplus, and a fresh supply of river water is admitted, this is done perhaps eight or ten times during a season. Were the quantity of water actually required to bring a crop to maturity only permitted to pass into the fields, they would be in a great measure deprived of the natural manure they now receive, and the out-turn would be far inferior to what it now is. As a rule, in cases of artificial irrigation, the natural manure would be reduced to a minimum if the water in the channels were maintained at a fixed level or head, and the sluices were capable of discharging only the quantity of water actually required to bring the crops to maturity. In such cases artificial manuring would be absolutely necessary, or the land would soon become impoverished, and the out-turn would be very small. Where large tracts, therefore, are to be irrigated, and where artificial manuring is impossible at times at which the supply of water is abundant, means should be devised to allow as large a quantity of water as possible to pass into the fields. And

Second.—This would probably obviate the effects of allowing small quantities of water to stagnate, and to become absorbed by the soil over large areas. There is little doubt that the unhealthiness of the plains of Lombardy, where rice is grown, is due to the stagnation of the water in the fields, while the healthiness of the Delta districts is probably due to the fact that water is flowing over the country, and is in constant motion. The restriction, therefore, of the water supply to the actual requirements of the rice crops over large areas of country is, I am of opinion, fraught with danger.

Proceedings of the Madras Government, Public Works Department,
4th December 1866.

No. 53. ORDER THEREON, 4th December 1866, No. 3,847.

CIVIL WORKS, No. 10.

Communicated to the Revenue
Department, with reference to the Orders
in that Department No. 2,945, under
date the 31st October 1866.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Revenue Department.

.. Superintending Engineer, 6th Division.

.. Consulting Engineer Madras Irrigation and Canal Company.

Exd. S. T. Augustin.

No 1029-

Super Engineer Office 6th Division
Dangre
27th November 1866.

From

Captain R. F. Oakes R.E.
Superintending Eng. 6th Division

To

Colonel C. A. Orr, R.E.
Secy to Government P.W.D.
Fort Saint-George

Sir,

With reference to G. O.
No. 3526 of the 5th November, I
have the honor to inform you
that it is too late in the
season to try the experiment
to ascertain the quantity of
water required to mature a
Rice crop.

I explained in Letter
No. 967 dated 5th September 1865,
the difficulties which would
attend the experiment in a
District watered as Dangre
is & proposed that Captain
Hasted should undertake
the experiment in his own
compound. He has since
given up the house he then
occupied & as I am convinced
that the experiment cannot
be undertaken in this Division

G. O. No 2697-
10/14th Sept^r

with a shadow of a chance of obtaining correct data it would be unexpedient to make any outlay in the attempt.

3. In connexion with the experiment relative to the quantity of water required to bring a Rice Crop to maturity, the two following points appear to me to be worthy of consideration.

1st That in cases in which large areas are irrigated as in the Delta Districts, where it is impossible to supply manure artificially for the lands, the outcome of the Crops is due in a great degree to the alluvium deposited on the lands. When the Rivers are in flood water, rich with deposit, is allowed to flow onto the irrigated lands & is confined by the field banks till the deposit has settled when the clear

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water is allowed to flow off by the surplus, and a fresh supply of River water is admitted. This is done perhaps 8 or 10 times during a season. Were the quantity of water actually required to bring a crop to maturity, only permitted to pass into the fields, they would be in a great measure deprived of the natural manure they now receive & the outcome would be far inferior to what it now is. As a rule in cases of artificial irrigation the natural manure would be reduced to a minimum if the water in the channels were maintained at a fixed level or head & the sluices were capable of discharging only the quantity of water actually required to bring the Crops to maturity.

In such cases artificial
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solutely necessary or the
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2^d This would probably
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striction therefore of the
water supply to the actual
requirements of the Rice
Crops over large areas
of country is, I am of opi-
nion, fraught with danger.

I have the honor to be
Sir,

Your most Obedt. Servant

J. F. Waters Capt. R.E.
Superintending Engr. & Comm.

6-11-18

Wm. D. Harris

Character 300

James C. Hays

27-11-1847

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End

210.38717

to the value in the
 Alphabet No 2945, under date
 the 31st October 1886—

Thos St George }
4th Decr 1866 }



1800
No Receipt
to 53 & Rec
to Can Sup for 9 MCo
Sept 15 - Dec 15